Human Cadherin-7 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 1087216

Catalog Number: FAB11591R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects rhCDH-7 in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1087216
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese Hamster Ovary cell line, CHO-derived human Cadherin-7 Met1-Thr607 Accession # Q9ULB5
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Cadherin-7 is an approximately 115 kDa type I transmembrane protein belonging to the Cadherin superfamily of calcium-dependent adhesion molecules. Cadherins are involved in multiple processes including embryonic development, cell migration, and maintenance of epithelial integrity (1). Human Cadherin-7 is synthesized with a 27 amino acid (aa) signal peptide and a 20 aa N-terminal propeptide. The mature cell surface-expressed protein consists of a 738 amino acid (aa) extracellular domain (ECD) that contains five Cadherin repeats, a 21 aa transmembrane segment, and a 157 aa cytoplasmic domain (2, 3). Within the ECD, human Cadherin-7 shares 99% and 97% aa sequence identity with mouse and rat Cadherin-7, respectively. Cadherin-7 interacts homotypically and heterotypically with Cadherin-14 and more weakly with Cadherins-6, -9, and -12 (3, 4). Cellular adhesion mediated by Cadherin-7 is more weak than that mediated by E- or N-Cadherin, although it can be strengthed by Fibronectin binding to Integrins on the same cell (5, 6). Cadherin-7 is localized to discrete regions of the developing nervous system. In chick and mouse, it is expressed in the basal plate of the neural tube, migrating cranial motoneurons, and migrating neural crest cells (4, 7, 8), lateral regions of the hindbrain and migrating Purkinje cell precursors (8, 9), striatum, parahippocampal areas, and somatosensory cortex of the forebrain (10 - 12), neural retina and cochlea (13, 14). Cadherin-7 interactions promote motor axon growth and inhibit axonal branching, whereas Cadherin-6B promotes branching during cranial motorneuron development (7). Cadherin-7 performs a similar function during limb bud development during which it participates in the migration and condensation of mesenchymal cells (15). Cadherin-7 is overexpressed on primary melanoma cells where it binds melanoma inhibitory activity (MIA), a secreted melanoma cell protein that promotes tumor progression (16).

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